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NRO REVIEW COMPLETED

2 March 1962

MEMORANDUM FOR : Chief, Development Branch, OPD-DD/P  
SUBJECT : Trip Report

1. PURPOSE: Travel to Vandenberg Air Force Base 23 through 26 February to monitor loading operations and review hardware for the first CORONA/MURAL flight article.

2. GENERAL:

a. Auxiliary Frame Camera: Spent Saturday in the "1" building reviewing the general state of readiness with special attention to capability of the Auxiliary Frame Camera to be included in this first mission. We had this item disassembled on a table for final cleaning prior to loading when we encountered difficulties in getting the shutters to operate. There was no instruction book or wiring diagram for this article, but rather was handled and loaded based on the experience of the personnel involved from Itel [redacted] This item has been under question by SETO for a number of months and is felt that many of the problems that plagued this camera were caused by the fact that this was the first of a kind and really a handmade article. Once we educated ourselves on how to make it work, it worked beautifully. We loaded this camera on Saturday and installed it in the fairing so that the fairing could be mated to the busket on R-3. We made several exposures with a flashlight, developed these in a tray and I brought copies back to give to WPIC, USAF and AMS as a sample of the grid pattern they will see after a flight. Throughout the entire final loading and checkout, the Auxiliary Frame Camera functioned properly. I investigated the electrical circuitry and found it to be fused adequately in the system so that any inflight failure would not affect the primary payload area or system. In fact, to assure that there will be no binding between takeup cassette of the Auxiliary Frame Camera and the two main cassettes, we unspooled approximately 30 feet of the 140 feet available on the frame supply spool. This still provides material for more than 100% coverage by the Auxiliary

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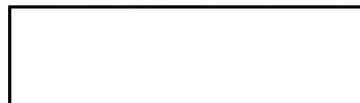
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Frame Camera. Another problem was discovered in regard to the supply spool core for this item . . . the center portion of the core was too tight to fit the spool in loading and we had to use sand paper to enlarge the hole during the loading operation. A check has been made on this problem area and it was found that the fit problem has been corrected after spool number 12. These spools which are off size will be used in tests only and refurbished to meet standard specifications.

b. Main Instruments: A dry run review of loading procedures was conducted at 8 Sunday morning with all concerned prior to going to dark for final loading. The written "count-down" procedures were very good and the entire loading operation went extremely smooth. The improved handling fixtures for the MURAL as opposed to the C\*\*\* are a major step forward. Even though there are two separate barrel assemblies to load and mate, the lapse time for the entire operation was only about 2 1/2 hours. One advantage is that the first fairing section (containing the Auxiliary Frame Camera and the clock) can be loaded on the previous day and mated to the bucket in full light conditions (since the Auxiliary Frame Camera and its chute into the bucket are completely light tight). The only problem encountered during this loading operation was during the camera operation of Instrument #70 to run the splice from the supply spool through the instrument to cut off the film used for threading prior to mating with the bucket. At this time Instrument #70 jumped out of the rails very shortly after the operation started. I felt, and the contractor representatives concurred, that 70 has always been sensitive to tension and using a man to act as a takeup cassette by hand caused some relaxation of tension during this operation. Instrument #70 has never jumped the rails after final system mating and everything was buttoned up proper. However, we did watch this one very carefully through an access hole in the fairing after final mating. We ran approximately 50 cycles with perfect operation of both main instruments. The Sanborn Recorder verified our visual observations.

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